MARINE
RECREATIONAL INFORMATION
PROGRAM

FY 2014 Project Plan

For-Hire Electronic Census Reporting of Red Snapper Catch Data in Alabama

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Dave Donaldson, Gulf States Marine Fisheries Commission

Operations Team

1. Overview

1.1. Background

The Gulf of Mexico supports a diverse recreational fishery with fishing effort conducted throughout the year by both private and for-hire anglers. Members of the reef fish complex comprise the largest component of landings within the region. Within this group red snapper is an important species for the for-hire fishery as approximately one-third of the Gulf red snapper landings are attributed to this group (Gulf of Mexico Fishery Management Council 2013). Red snapper have been federally regulated since the late 1990 when the stock was considered to be overfished and undergoing overfishing (SEDAR 31). Although early management of red snapper utilized size and bag limit modifications the season length remained constant until the late 1990's when managers added season length restrictions to the suite of tools for constraining red snapper catch in the fishery. The Magnuson-Stevens Fishery Conservation and Management Act (Act), the law which outlines federal fishery management, was reauthorized in 2006. One of the requirements within the reauthorized Act was the establishment of stricter timeframes for rebuilding fish stocks that were considered overfished. To assist management in meeting rebuilding goals for specific stocks several thresholds were identified which triggered certain management actions if exceeded. Beginning in 2008, the red snapper fishery was managed under the new provisions of the Act and the most noticeable change in the fishery was dramatic reductions in season length (194 days in 2007 compared to 65 days in 2008).

The red snapper population appears to have responded favorably to recent management (SEDAR 31). However, ever shortening season lengths have been prescribed to maintain catches at or below acceptable levels. Reduced access often creates economic hardship in coastal communities as recreational fishing constitutes a significant portion of the economies within these communities, particularly those in Alabama.

Maintaining the recreational sector within prescribed quotas by forecasting season length using prior fishing year information has been difficult to achieve in the Gulf of Mexico red snapper recreational fishery. In fact, the quota has been exceeded 14 years out of the past 22 years (Gulf of Mexico Fishery Management Council 2013). Reduced season lengths such as those experienced recently in the red snapper fishery have created derby conditions. The use of random survey methodologies may not be appropriate to determine landings for species managed under derby conditions and estimates may be significantly over- or underestimated. In addition, forecasting season length based on prior year fishery metrics may have unintended consequences. If bad weather occurs or economic conditions falter during the season the quota may not be met and the fishery may not achieve optimum yield. On the other hand, landings may exceed quotas due to a variety of reasons which are would cause landings to exceed quotas potentially leading to further restrictions and subsequent economic loss to communities and businesses which depend on stability.

Quota monitoring is often used in fisheries to prevent or minimize quota overages and extend fishing access when forecasted season end dates are not met. An in-season quota monitoring system for the recreational red snapper fishery could provide the same benefits and ultimately helping to provide more stability to the fishery. DCNR/MRD requests funds to explore the use of a quota monitoring system to assist in keeping the recreational sector within its quota.

1.2. Project Description

This proposal requests MRIP funds to pilot a simplified system to monitor landings of red snapper near real-time. This will require; 1) development and implementation of a mandatory reporting system for recreational red snapper landings from each for-hire trip made by Alabama for-hire vessels and 2) development of methods for validating self-reported data and tracking reporting compliance to determine if adjustments to raw data are necessary.

In 2006, the National Research Council reviewed survey methods used among recreational fisheries throughout the United States and determined for-hire fisheries and managers would benefit from logbooks (National Research Council 2006). Specifically, logbook programs if set up and maintained appropriately could provide accurate and timely information. However, certain provisions were required to ensure logbooks were effective data collection tools including mandatory reporting with consistent and appropriate penalties for non-reporting and strong verification processes. These provisions were necessary as mandatory logbook reporting without penalties for non-reporting or robust verification procedures required large correction factors and thus negated the benefits of the program. Similar results were found when logbook studies were reviewed through a project funded by the Marine Recreational Information Program and detailed in a final report (MRIP 2013). The report developed best practice recommendations when conducting logbook surveys including but limited to; develop methods to track missing reports, conduct research to account for missing trips, and incorporate validation methods to measure and account for incomplete reporting and inclusion of all licensed for-hire vessels.

Although traditional logbook programs often provide detailed information about fishing trips which are useful in stock assessments these programs typically require significant amounts of resources and can represent a large reporting burden for participants. The current proposal will comprise of a data collection system which will require significantly less resources to operate and represent a minimum reporting burden to the participant. Data elements to be reported may include vessel license number (all for-hire vessels operating within Alabama jurisdiction are required to have a license), vessel identification (state registration or US Coast Guard documentation number), number of fishermen on board trip, number of red snapper harvested and number of red snapper released dead.

A mandatory electronic reporting system will be developed and implemented whereby representatives of for-hire vessels licensed in Alabama report catches of red snapper after each

trip. DCNR/MRD staff will work with DCNR-IT staff to modify an existing smartphone application (Game Check) and internet accessible databases developed by the Alabama Department of Wildlife and Freshwater Fisheries and used by Alabama hunters to report deer and turkey harvests (more information can be found at www.outdooralabama.com). For-hire vessel representatives will submit summary trip reports regarding red snapper catches upon returning to the dock. For-hire representatives can also report via telephone through Interactive Voice Response (IVR) software.

Reported data will be verified with on-the-water enforcement, field verification of vessel activity and dockside validation procedures in order to gain high quality data available in near real time. Adjustments of raw data will be made as appropriate depending upon the results of field verifications and dockside validations. Attempts will be made to produce adjusted daily landings totals within two days of the reporting day.

1.3. Objectives

1. Advance regulation to require mandatory reporting of red snapper by for-hire vessel representatives when trip has ended.
2. Develop an electronic reporting system for mandatory reporting of red snapper harvest and dead discards by for-hire vessels landing red snapper in Alabama utilizing smartphone, internet, and IVR phone technologies. Data on red snapper landings in the for-hire industry will be collected in a timely manner.
3. Conduct outreach to the for-hire fishery to facilitate industry support and encourage compliance with reporting requirements.
4. Develop QA/QC procedures for reported data.
5. Develop field validation protocols and procedures to determine appropriate under- and over-reporting adjustment factors. Field validation assignments will be completed by biological staff who will visit marinas and boat ramps to record pertinent trip information from vessels landing red snapper.

1.4. References

Marine Recreational Information Program Project: For-Hire Electronic Logbook Pilot Study in the Gulf of Mexico-Final Report. Submitted to MRIP Operations Team as revised in response to peer review, February 2013. National Research Council (NRC), 2006. Review of Recreational Fisheries Survey Methods. National Academies Press, Washington, D.C. 187 pp. Regional Management of Recreational Red Snapper-Public Hearing Draft for Amendment 39 of the Fishery Management Plan of Reef Fish Resources of the Gulf of Mexico, August 2013. Gulf of Mexico Fishery Management Council. 138 pp. SEDAR 2013. Southeast Data Assessment and Review: Gulf of Mexico Red Snapper Stock Assessment Report. SEDAR 31, 4055 Faber Place Drive, Suite 201, North Charleston, South Carolina.

2. Methodology

2.1. Methodology

For-hire vessel representatives will report required data after each trip. Field validation of vessel activity and dockside sampling of completed trips to collect vessel registration, angler, catch and weight of harvested red snapper will be conducted by trained DCNR/MRD samplers. Data from samplers will be compared to reported trips from the same vessel and formulas to calculate correction factors will be developed for number of anglers and number of fish harvested.

Procedures to collect and process field data will be implemented in order to calculate a harvest figure within two days of trip information being reported. Final landing number will be compared to preliminary estimates generated by the current survey as part of the evaluation of the program.

2.2. Regions

Gulf of Mexico

2.3. Geographic Coverage

Alabama

2.4. Temporal Coverage

Gulf of Mexico recreational red snapper season (~June 2014).

2.5. Frequency

Daily reporting of red snapper harvest data

2.6. Unit of Analysis

For-hire vessel trip.

2.7. Collection Mode

Online reporting of required data via smartphone application and internet, or telephone.

3. Communications Plan

3.1. Internal

Key DCNR/MRD staff will have bi-monthly meetings to evaluate project status, identify key issues remaining for project implementation, and delegate work as appropriate. Coordination activities outside scheduled meetings will be made primarily via phone and email,

3.2. External

DCNR/MRD project team leader will communicate with the Gulf States Marine Fisheries Commission (anticipated liaison) as needed. Once the regulation is signed, outreach will be conducted with for-hire vessel owner/operators through mailing(s), phone contact and presentation(s) to industry organizations. Project status reports will be provided monthly through the MRIP Data Management System (MDMS).

4. Assumptions and Constraints

4.1. New Data

Yes

4.2. Track Costs

Yes

4.3. Funding Vehicle

Cooperative Agreement with the Gulf States Marine Fisheries

4.4. Data Resources

4.5. Other Resources

4.6. Regulations

Currently, state regulations are not in place to require mandatory reporting of recreational red snapper catches. However, general support from the Alabama for-hire fishery exists to improve data collection for red snapper. The Commissioner of the ADCNR understands the issues related to red snapper management and is eager to develop better systems to monitor landings. A new regulation will be promulgated to address mandatory reporting within the for-hire fishery.

4.7. Other

5. Risk

5.1. Project Risk

Table 1: Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
Development of smartphone app, database and IVR telephone module will not occur in time to test.	Reporting rates may be reduced and timeliness of reports will be reduced.	Low	DCNR/MRD staff will engage DCNR-IT staff and IVR contractor to develop modified version of technology which is already in use for other game species.
Low reporting rates.	Quality of data.	Low	Captains/owners who do not report as required will receive a citation. Significant outreach will be conducted before and during the fishing season.
Lack of field samplers.	Validation of reported data.	Low	DCNR/MRD will hire additional staff to ensure a robust validation program is maintained throughout fishing season.
Regulation to require mandatory reporting of red snapper catches will not be promulgated.	All trips will not be reported.	Medium	Outreach with Conservation Advisory Board members and the for-hire industry is planned to build support for the regulation.

6. Final Deliverables

6.1. Additional Reports

A final report will be developed containing raw vessel and angler trip data and harvest data.

6.2. New Data Sets

Census-based totals of Alabama for-hire red snapper harvest

6.3. New Systems

Smartphone application will be developed for reporting red snapper catch data.

7. Project Leadership

7.1. Project Leader and Members

Table 2: Project Members

Project Role	Name	Organization	Title
Team Leader	Kevin Anson	Alabama DCNR/Marine Resources Division	Chief Biologist
Team Member	Karon Aplin	AL DCNR/Marine Resources Division	Biologist II
Team Member	Scott Bannon	Alabama DCNR/Marine Resources Division	Chief Enforcement Officer
Team Member	Julie Perry	Alabama DCNR-IT Section	IT Manager

8. Project Estimates

8.1. Project Schedule

Table 3: Project Schedule - Major Tasks and Milestones

#	Schedule Description	Planned Start	Planned Finish	Prerequisites	Milestones
1	Project Planning	12/01/2013	12/31/2013		
2	Reporting regulation development: outreach with those in regulatory process and for-hire operators.	01/01/2014	04/15/2014		Y
3	Smartphone App platform, internet database, IVR telephone capture development.	01/01/2014	05/01/2014		
4	Develop field validation procedures and determine formulas for adjustment factors.	03/01/2014	05/01/2014		
5	Beta testing of reporting systems and fix identified problems.	05/01/2014	05/21/2014	3	Y
6	Collect data, perform QA/QC procedures and conduct field validations.	06/01/2014	07/10/2014	3, 5	

7	Develop in-season and final catch/harvest rates using adjustment factors.	06/01/2014	07/31/2014	6	Y
8	Evaluation final report.	08/01/2014	10/31/2014		

8.2. Cost Estimates

Table 4: Cost EstimatesYes

Project Need	Cost Description	Date Needed	Estimated Cost
Planning and outreach activities	DCNR-IT and DCNR/MRD staff time	12/01/2013	$5000.00
Field validation procedure development	DCNR/MRD staff time	01/01/2014	$2500.00
Oversee field data collection, QA/QC and correction factor development	DCNR/MRD staff time	04/01/2014	$10000.00
Smartphone App and internet database development	DCNR-IT and DCNR/MRD staff time	01/01/2014	$10000.00
Final report	DCNR/MRD staff time	10/31/2014	$5000.00
Cooperative Agreement Oversight	GSMFC Cooperative Agreement management/oversight	12/01/2013	$2500.00
TOTAL			$35000.00